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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,316	12/12/2003	Jin-Meng Ho	TI-36066 (1962-08700)	1371
23494	7590	06/29/2007	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			JOSEPH, JAISON	
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			ART UNIT	PAPER NUMBER
			2611	
			NOTIFICATION DATE	DELIVERY MODE
			06/29/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/734,316

Applicant(s)

HO, JIN-MENG

Examiner

Jaison Joseph

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-11 and 18-21 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 12-17 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 – 5, 7, 12 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleek et al (US Patent 5,533,025) in view of Cook et al. (Introduction to Spread Spectrum, IEEE Communication Magazine, Vol. 21 March 1983).

Regarding claim 1, Fleek et al teach a method of wireless communication (see figure 2) that comprises: receiving a beacon frame that specifies a hopping sequence (see figure 7, figure shows frequency pattern number which is equivalent to frequency hopping sequence); missing a subsequent beacon frame (see column 9, lines 20 – 27); and using the rotation sequence and hopping sequence received previously to determine a current frequency hopping sequence for a current superframe following the missed beacon frame (see column 9, lines 20 – 27). Fleek et al does not expressly

teach that the beacon frame specifies a rotation sequence. However in analogous art, Cook et al teach using rotation sequence (see figure 10 figure 10 shows using different hopping sequence at different time). Therefore it would be obvious to an ordinary skilled in the art at the time the invention was made to use beacon frame to specify a rotation sequence. The motivation or suggestion to do so is to reduce the interference in the transmitted signal.

Regarding claim 2, which inherits the limitations of claim 1, Fleek et al further teach 2 using the current frequency hopping sequence to receive a frame transmitted during the current superframe (see figure 7)

Regarding claim 3, which inherits the limitations of claim 1, Fleek et al further teach 2 using the current frequency hopping sequence to transmit a frame transmitted during the current superframe (see figure 7).

Regarding claim 4, which inherits the limitations of claim 1, Fleek et al further teach wherein the beacon frame includes an information element that specifies the rotation sequence and a frequency hopping sequence for a superframe following the beacon frame.

Regarding claim 5, which inherits the limitations of claim 4, Fleek et al further teach wherein the rotation sequence is specified in terms of a rotation index and the hopping sequence is specified in terms of a hopping index (see column 7, lines 29 – 37).

Regarding claim 7, which inherits the limitations of claim 1, Fleek et al further teach wherein the hopping sequence is from a pool of hopping sequences that has a minimum cross-correlation (see column 7, lines 29 – 37).

Regarding claim 12 and 13, the claimed apparatus including the features corresponds to subject matter mentioned in the rejection of claim 1 is applicable hereto. Further Fleek et al teach the operations can be done by using software, which runs on a microcontroller and stored in a memory (see column 4, lines 63 – 68).

Regarding claim 14, which inherits the limitations of claim 13, the claimed apparatus including the features corresponds to subject matter mentioned in the rejection of claim 2 is applicable hereto.

Regarding claim 15, which inherits the limitations of claim 12, the claimed apparatus including the features corresponds to subject matter mentioned in the rejection of claim 2 is applicable hereto.

Regarding claim 16, which inherits the limitations of claim 15, the claimed apparatus including the features corresponds to subject matter mentioned in the rejection of claim 7 is applicable hereto.

Regarding claim 17, which inherits the limitations of claim 12, the claimed apparatus including the features corresponds to subject matter mentioned in the rejection of claim 7 is applicable hereto.

Allowable Subject Matter

Claims 8 – 11 and 18 – 21 are allowable over prior art of record.

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison Joseph whose telephone number is (571) 272-6041. The examiner can normally be reached on M-F 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Joseph
06/22/2006


CHIEH M. FAN
SUPERVISORY PATENT EXAMINER